provide a very accurate positioning of the laser beam 7 on the skin 11 by the mirrors 19, 21, the control unit 17 further comprises a calibration member 81 for calibrating said predetermined mathematical relation on the basis of a measured relation between the output signals u_{M1}, u_{M2} and an actual position of the laser beam 7 on the skin 11. Said calibration, for example, constitutes a re-calculation of said coefficients of the predetermined mathematical relation on the basis of the measured relation between the output signals u_{M1}, u_{M2} and the actual position of the laser beam 7 on the skin 11, and is carried out by the control unit 17, for example, each time the hair-removing device 1 is started or each time after a predetermined time interval. To carry out said calibration, the mirrors 19, 21 are consecutively positioned in a predetermined number of calibration positions. For this purpose, the fourth processor 59 consecutively supplies a predetermined number of output signals u_{M1}, u_{M2} having predetermined values. In each calibration position of the mirrors 19, 21, the actual position of the laser beam 7 on the skin 11 is determined by means of a seventh processor 83 of the control unit 17, which determines said actual position from the image detected by the image sensor 47. For this purpose, as shown in Fig. 4, the seventh processor 83 receives the signal u_S supplied by the image sensor 47, and supplies a signal u_{AP} corresponding to the actual position of the laser beam 7 on the skin 11 to the calibration member 81. After the determination of the actual position of the laser beam 7 in each calibration position of the mirrors 19, 21, the calibration member 81 supplies a signal u_{CAL} corresponding to the re-calculated coefficients of the predetermined mathematical relation to the fourth processor 59. During said calibration process, the fourth processor 59 activates the laser source 3 at a comparatively low energy density via a suitable value of the signal u_L. Said energy density is as low as possible, but such that the spot of the laser beam 7 on the skin 11 is still sufficiently bright to be detected by the image sensor 47. In this manner, skin irritation or

damage are prevented during the calibration process, and the energy consumption of the laser source 3 is limited. It is noted, that the invention also comprises embodiments, in which the actual position of the laser beam 7 on the skin 11 is determined in a similar manner from the image detected by the image sensor 47, but in which the laser beam manipulator 5 is corrected in a different manner. The control unit 17 may, for example, alternatively be provided with a feed back control circuit comprising a comparator, which compares the actual position of the laser beam with the desired target position and supplies an error signal, and a PID regulator, which determines the output signals u_{M1} and u_{M2} on the basis of said error signal in such a manner that the measured actual position equals the desired target position. The invention also comprises embodiments, in which the actual position of the laser beam on the skin is not determined by means of the image sensor, but by means of a separate sensor means such as, for example, sensors which directly measure the angular positions of the mirrors 19, 21.

As Fig. 1 shows, the hair-removing device 1 according to the invention further comprises a handle 181 by means of which the user can place the hair-removing device 1 on the skin 11 to be treated and can displace it over the skin 11. As was described above, the portion of the skin 11 present below the opening 33 only is treated. After the treatment of said portion of the skin 11, the user should displace the hair-removing device 1 into a next position on the skin 11. The hair-removing device 1 may be provided, for example, with an acoustic source which is triggered by the control unit 17 and which produces an acoustic signal the moment the treatment of the portion of the skin 11 present below the opening 33 has been completed. The hair-removing device 1 may alternatively be provided, for example, with electrical drive means controlled by the control unit 17 for the automatic displacement of the hair-removing device 1 over the skin 11 to be treated, instead of with such an acoustic source.